

SEQUENCE LISTING

(110) WHITE, David

(121) COMPOSITIONS, KITS, AND METHODS FOR PROGNOSTICATION,
DIAGNOSIS, PREVENTION, AND TREATMENT OF BONE-RELATED
DISORDERS AND OTHER DISORDERS

(131) 110147.00-9/16J1

(141) Not Yet Assigned

(141) 1001-07-1-

(151) US 60146,614

(151) 1999-07-30

(161) *

(171) Patent In Ver. 2.1

(211) 1

(211) 419

(211) DNA

(213) Homo sapiens

(400) 1

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mptatygog ckyamcamvt vvdgnsmvav tknkknsgn vvsavadmva yymhamsggw 60
lsctmggsgv vgsnvaanry cychsyrsvr ntcyvtwmtv avnmygtydr tytcnynnvt 120
vavdvvgcy vavtvaard agadnavint mvarowenvt vavsknagk nwyaaayans 180
mavvganrs ywtkamrhgs drmartazar abardandra hacartmavr nvgdtaaaghd 240
asgghkhrs ssayrksast hnksvshska asghkvsghs kasghksatv ykasvnhgds 300
whamsstkd svhkassnkt ghvvsagshs ksasaatshk katshattad ykattshkaa 360
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(211) 2

(211) 1999

(211) PET

(213) Homo sapiens

(400) 2

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Thr Gly Thr Thr Thr Gly Cys Thr Gly Thr Cys Thr Gly Gly Ala Cys
  1                      5                      10                      15

Cys Thr Gly Gly Cys Thr Gly Cys Thr Gly Ala Thr Cys Cys Thr Gly
      20                      25                      30

Ala Gly Cys Cys Thr Gly Cys Thr Gly Gly Gly Ala Gly Ala Thr Cys
    
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35

40

45

Thr Thr Ala Ala Cys Gly Ala Thr Cys Cys Cys Cys Ala Gly Gly Ala
50 55 60

Gly Cys Ala Ala Cys Ala Thr Gly Gly Gly Gly Cys Cys Cys Ala Cys
65 70 75 80

Cys Cys Thr Ala Gly Cys Gly Gly Thr Thr Cys Cys Cys Ala Cys Cys
85 90 95

Cys Cys Cys Thr Ala Thr Gly Gly Cys Thr Gly Thr Ala Thr Thr Gly
100 105 110

Gly Cys Thr Gly Thr Ala Ala Gly Cys Thr Ala Cys Cys Cys Cys Ala
115 120 125

Gly Cys Cys Ala Gly Ala Ala Thr Ala Cys Cys Cys Ala Cys Cys Gly
130 135 140

Gly Cys Thr Cys Thr Ala Ala Thr Cys Ala Thr Cys Thr Thr Thr Ala
145 150 155 160

Thr Gly Thr Thr Cys Thr Gly Cys Gly Cys Gly Ala Thr Gly Gly Thr
165 170 175

Thr Ala Thr Cys Ala Cys Cys Ala Thr Cys Gly Thr Thr Gly Thr Ala
180 185 190

Gly Ala Cys Cys Thr Ala Ala Thr Cys Gly Gly Cys Ala Ala Cys Thr
195 200 205

Cys Cys Ala Thr Gly Gly Thr Cys Ala Thr Thr Thr Thr Gly Gly Cys
210 215 220

Thr Gly Thr Gly Ala Cys Gly Ala Ala Gly Ala Ala Cys Ala Ala Gly
225 230 235 240

Ala Ala Gly Cys Thr Cys Cys Gly Gly Ala Ala Thr Thr Cys Thr Gly
245 250 255

Gly Cys Ala Ala Cys Ala Thr Cys Thr Thr Cys Gly Thr Gly Gly Thr
260 265 270

Cys Ala Gly Thr Cys Thr Cys Thr Cys Thr Gly Thr Gly Gly Cys Cys
275 280 285

Gly Ala Thr Ala Thr Gly Cys Thr Gly Gly Thr Gly Gly Cys Cys Ala

290

295

300

Thr Cys Thr Ala Cys Cys Cys Ala Thr Ala Cys Cys Cys Thr Thr Thr
305 310 315 320

Gly Ala Thr Gly Cys Thr Gly Cys Ala Thr Gly Cys Cys Ala Thr Gly
325 330 335

Thr Cys Cys Ala Thr Thr Gly Gly Gly Gly Gly Cys Thr Gly Gly Gly
340 345 350

Ala Thr Cys Thr Gly Ala Gly Cys Cys Ala Gly Thr Thr Ala Cys Ala
355 360 365

Gly Thr Gly Cys Cys Ala Gly Ala Thr Gly Gly Thr Cys Gly Gly Gly
370 375 380

Thr Thr Cys Ala Thr Cys Ala Cys Ala Gly Gly Gly Cys Thr Gly Ala
385 390 395 400

Gly Thr Gly Thr Gly Gly Thr Cys Gly Gly Cys Thr Cys Cys Ala Thr
405 410 415

Cys Thr Thr Cys Ala Ala Cys Ala Thr Cys Gly Thr Gly Gly Cys Ala
420 425 430

Ala Thr Cys Gly Cys Thr Ala Thr Cys Ala Ala Cys Cys Gly Thr Thr
435 440 445

Ala Cys Thr Gly Cys Thr Ala Cys Ala Thr Cys Thr Gly Cys Cys Ala
450 455 460

Cys Ala Gly Cys Cys Thr Cys Cys Ala Gly Thr Ala Cys Gly Ala Ala
465 470 475 480

Cys Gly Gly Ala Thr Cys Thr Thr Cys Ala Gly Thr Gly Thr Gly Cys
485 490 495

Gly Cys Ala Ala Thr Ala Cys Cys Thr Gly Cys Ala Thr Cys Thr Ala
500 505 510

Cys Cys Thr Gly Gly Thr Cys Ala Thr Cys Ala Cys Cys Thr Gly Gly
515 520 525

Ala Thr Cys Ala Thr Gly Ala Cys Cys Gly Thr Cys Cys Thr Gly Gly
530 535 540

Cys Thr Gly Thr Cys Cys Thr Gly Cys Cys Cys Ala Ala Cys Ala Thr

545

550

555

560

Gly Thr Ala Cys Ala Thr Thr Gly Gly Cys Ala Cys Cys Ala Thr Cys
555 570 575

Gly Ala Gly Thr Ala Cys Gly Ala Thr Cys Cys Thr Cys Gly Cys Ala
580 585 590

Cys Cys Thr Ala Cys Ala Cys Cys Thr Gly Cys Ala Thr Cys Thr Thr
595 600 605

Cys Ala Ala Cys Thr Ala Thr Cys Thr Gly Ala Ala Cys Ala Ala Cys
610 615 620

Cys Cys Thr Gly Thr Cys Thr Thr Cys Ala Cys Thr Gly Thr Thr Ala
625 630 635 640

Cys Cys Ala Thr Cys Gly Thr Cys Thr Gly Cys Ala Thr Cys Cys Ala
645 650 655

Cys Thr Thr Cys Gly Thr Cys Cys Thr Cys Cys Cys Thr Cys Thr Cys
660 665 670

Cys Thr Cys Ala Thr Cys Gly Thr Gly Gly Gly Thr Thr Thr Cys Thr
675 680 685

Gly Cys Thr Ala Cys Gly Thr Gly Ala Gly Gly Ala Thr Cys Thr Gly
685 690 700

Gly Ala Cys Cys Ala Ala Ala Gly Thr Gly Cys Thr Gly Gly Cys Gly
705 710 715 720

Gly Cys Cys Cys Gly Thr Gly Ala Cys Cys Cys Thr Gly Cys Ala Gly
725 730 735

Gly Gly Cys Ala Gly Ala Ala Thr Cys Cys Thr Gly Ala Cys Ala Ala
740 745 750

Cys Cys Ala Ala Cys Thr Thr Gly Cys Thr Gly Ala Gly Gly Thr Thr
755 760 765

Cys Gly Cys Ala Ala Thr Thr Thr Thr Cys Thr Ala Ala Cys Cys Ala
770 775 780

Thr Gly Thr Thr Thr Gly Thr Gly Ala Thr Cys Thr Thr Cys Cys Thr
785 790 795 800

Cys Cys Thr Cys Thr Thr Thr Gly Cys Ala Gly Thr Gly Thr Gly Cys

815

Cys Ala Gly Gly Ala Gly Gly Cys Cys Cys Gly Thr Ala Cys Cys Cys

1067	1065	1073
Thr Gly Gly Cys Cys Cys Gly Cys Gly Cys Cys Cys Gly Thr Gly Cys		
1075	1080	1085
Cys Cys Ala Thr Gly Cys Thr Cys Gly Cys Gly Ala Cys Cys Ala Ala		
1090	1095	1100
Gly Cys Thr Cys Gly Thr Gly Ala Ala Cys Ala Ala Gly Ala Cys Cys		
1105	1110	1115
Gly Thr Gly Cys Cys Cys Ala Thr Gly Cys Cys Thr Gly Thr Cys Cys		
1120	1130	1135
Thr Gly Cys Thr Gly Thr Gly Gly Ala Gly Gly Ala Ala Ala Cys Cys		
1140	1145	1150
Cys Cys Gly Ala Thr Gly Ala Ala Thr Gly Thr Cys Cys Gly Gly Ala		
1155	1160	1165
Ala Thr Gly Thr Thr Cys Cys Ala Thr Thr Ala Cys Cys Thr Gly Gly		
1170	1175	1180
Thr Gly Ala Thr Gly Cys Thr Gly Cys Ala Gly Cys Thr Gly Gly Cys		
1185	1190	1200
Cys Ala Cys Cys Cys Cys Gly Ala Cys Cys Gly Thr Gly Cys Cys Thr		
1205	1210	1215
Cys Thr Gly Gly Cys Cys Ala Cys Cys Cys Thr Ala Ala Gly Cys Cys		
1220	1225	1230
Cys Cys Ala Thr Thr Cys Cys Ala Gly Ala Thr Cys Cys Thr Cys Cys		
1235	1240	1245
Thr Cys Thr Gly Cys Cys Thr Ala Thr Cys Gly Cys Ala Ala Ala Thr		
1250	1255	1260
Cys Thr Gly Cys Cys Thr Cys Thr Ala Cys Cys Cys Ala Cys Cys Ala		
1265	1270	1275
Cys Ala Ala Gly Thr Cys Thr Gly Thr Cys Thr Thr Thr Ala Gly Cys		
1280	1290	1295
Cys Ala Cys Thr Cys Cys Ala Ala Gly Gly Cys Thr Gly Cys Cys Thr		
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1315	1320	1325
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1330	1335	1340
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1345	1350	1355
Ala Cys Cys Cys Cys Ala Ala Gly Thr Cys Thr Gly Cys Cys Ala Cys		
1365	1370	1375
Thr Gly Thr Cys Thr Ala Cys Cys Cys Thr Ala Ala Gly Cys Cys Thr		
1380	1385	1390
Gly Cys Cys Thr Cys Thr Gly Thr Cys Cys Ala Thr Thr Thr Cys Ala		
1395	1400	1405
Ala Gly Gly Gly Thr Gly Ala Cys Thr Cys Thr Gly Thr Cys Cys Ala		
1410	1415	1420
Thr Thr Thr Cys Ala Ala Gly Gly Gly Thr Gly Ala Cys Thr Cys Thr		
1425	1430	1435
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1445	1450	1455
Ala Cys Thr Cys Thr Gly Thr Thr Cys Ala Thr Thr Thr Cys Ala Ala		
1460	1465	1470
Gly Cys Cys Thr Gly Cys Thr Thr Cys Cys Ala Gly Cys Ala Ala Cys		
1475	1480	1485
Cys Cys Cys Ala Ala Gly Cys Cys Cys Ala Thr Cys Ala Cys Thr Gly		
1490	1495	1500
Gly Cys Cys Ala Cys Cys Ala Thr Gly Thr Cys Thr Cys Thr Gly Cys		
1505	1510	1515
Thr Gly Gly Cys Ala Gly Cys Cys Ala Cys Thr Cys Cys Ala Ala Gly		
1525	1530	1535
Thr Cys Thr Gly Cys Cys Thr Thr Cys Ala Gly Thr Gly Cys Thr Gly		
1540	1545	1550
Cys Cys Ala Cys Cys Ala Gly Cys Cys Ala Cys Cys Cys Thr Ala Ala		
1555	1560	1565
Ala Cys Cys Cys Ala Thr Cys Ala Ala Gly Cys Cys Ala Gly Cys Thr		

1570

1575

1580

Ala Cys Cys Ala Gly Cys Cys Ala Thr Gly Cys Thr Gly Ala Gly Cys
 1585 1590 1595 1600

Cys Cys Ala Cys Cys Ala Cys Thr Gly Cys Thr Gly Ala Cys Thr Ala
 1605 1610 1615

Thr Cys Cys Cys Ala Ala Gly Cys Cys Thr Gly Cys Cys Ala Cys Thr
 1620 1625 1630

Ala Cys Cys Ala Gly Cys Cys Ala Cys Cys Cys Thr Ala Ala Gly Cys
 1635 1640 1645

Cys Cys Gly Cys Thr Gly Cys Thr Gly Cys Thr Gly Ala Cys Ala Ala
 1650 1655 1660

Cys Cys Cys Thr Gly Ala Gly Cys Thr Cys Thr Cys Thr Gly Cys Cys
 1665 1670 1675 1680

Thr Cys Cys Cys Ala Thr Thr Gly Cys Cys Cys Cys Gly Ala Gly Ala
 1685 1690 1695

Thr Cys Cys Cys Thr Gly Cys Cys Ala Thr Thr Gly Cys Cys Cys Ala
 1700 1705 1710

Cys Cys Cys Thr Gly Thr Gly Thr Cys Thr Gly Ala Cys Gly Ala Cys
 1715 1720 1725

Ala Gly Thr Gly Ala Cys Cys Thr Cys Cys Cys Thr Gly Ala Gly Thr
 1730 1735 1740

Cys Gly Gly Cys Cys Thr Cys Thr Ala Gly Cys Cys Cys Thr Gly Cys
 1745 1750 1755 1760

Cys Gly Cys Thr Gly Gly Gly Cys Cys Cys Ala Cys Cys Ala Ala Gly
 1765 1770 1775

Cys Cys Thr Gly Cys Thr Gly Cys Cys Ala Gly Cys Cys Ala Gly Cys
 1780 1785 1790

Thr Gly Gly Ala Gly Thr Cys Thr Gly Ala Cys Ala Cys Cys Ala Thr
 1795 1800 1805

Cys Gly Cys Thr Gly Ala Cys Cys Thr Thr Cys Cys Thr Gly Ala Cys
 1810 1815 1820

Cys Cys Thr Ala Cys Thr Gly Thr Ala Gly Thr Cys Ala Cys Thr Ala

1825 1830 1835 1840

Cys Cys Ala Gly Thr Ala Cys Cys Ala Ala Thr Gly Ala Thr Thr Ala
1845 1850 1855

Cys Cys Ala Thr Gly Ala Thr Gly Thr Cys Gly Thr Gly Gly Thr Thr
1860 1865 1870

Gly Thr Thr Gly Ala Thr Gly Thr Thr Gly Ala Ala Gly Ala Thr Gly
1875 1880 1885

Ala Thr Cys Cys Thr Gly Ala Thr Gly Ala Ala Ala Thr Gly Gly Cys
1890 1895 1900

Thr Gly Thr Gly Thr Gly Ala Ala Ala Ala Ala Thr Gly Cys Thr Cys
1905 1910 1915 1920

Thr Cys Gly Thr Ala Gly Gly Thr Gly Gly Cys Cys Ala Gly Gly Cys
1925 1930 1935

Ala Gly Thr

4010 - 2
4011 - 416
4012 - RNA
4013 - Mus sp.

4000 - 3
kavtgcgckk dyamcamvtv wdgnsnvav tknkkknagn vassradmva 60
yywyamsvgi wdsomvgvto svvgsntaan ryoychsykr srntcywttw vmtvavnmyg 120
tyditytony vnnatvtvch vvgycytkwk vaardagnn avrntmwavc wcvrttvav 180
kmapkwyaa ycaynschay gnsrirywtha mrhshsdrtw tratravra rdvrraracv 240
angtrvrvny gasahsdra svrktrstsv yrkashhkss ghksasvyka ssvhckasvh 300
sas-hkgdsy ykgdvtvhyra askvtshrsa gtshtsmag yksgtshatt tvdyattshs 360
stadvysash cntstghrad sasvsvaatd ttaasgdyrk vdddsdssd csdmav 416

4010 - 4
4011 - 1800
4012 - PRT
4013 - Mus sp.

4000 - 4
Ala Ala Gly Ala Thr Cys Cys Thr Gly Ala Gly Cys Thr Thr Gly Cys
1 5 10 15

Cys Thr Gly Gly Gly Ala Gly Gly Ala Ala Thr Gly Gly Cys Cys Ala
20 25 30

Cys Gly Gly Thr Cys Cys Cys Cys Ala Ala Gly Ala Gly Cys Ala Ala
35 40 45

Cys Ala Thr Gly Gly Gly Ala Cys Cys Thr Ala Cys Ala Ala Ala Gly
50 55 60

Gly Cys Gly Gly Thr Thr Cys Cys Cys Ala Cys Cys Cys Cys Ala Thr
65 70 75 80

Thr Cys Gly Gly Cys Thr Gly Cys Ala Thr Thr Gly Gly Cys Thr Gly
85 90 95

Thr Ala Ala Gly Cys Thr Gly Cys Cys Ala Ala Ala Gly Cys Cys Cys
100 105 110

Gly Ala Cys Thr Ala Cys Cys Cys Gly Cys Cys Ala Gly Cys Thr Cys
115 120 125

Thr Ala Ala Thr Cys Ala Thr Cys Thr Thr Cys Ala Thr Gly Thr Thr
130 135 140

Cys Thr Gly Cys Gly Cys Ala Ala Thr Gly Gly Thr Cys Ala Thr Cys
145 150 155 160

Ala Cys Ala Gly Thr Cys Gly Thr Cys Gly Thr Ala Gly Ala Cys Cys
165 170 175

Thr Gly Ala Thr Cys Gly Gly Gly Ala Ala Cys Thr Cys Cys Ala Thr
180 185 190

Gly Gly Thr Cys Ala Thr Thr Thr Thr Gly Gly Cys Thr Gly Thr Gly
195 200 205

Ala Cys Cys Ala Ala Gly Ala Ala Cys Ala Ala Gly Ala Ala Gly Cys
210 215 220

Thr Cys Cys Gly Ala Ala Ala Thr Thr Cys Thr Gly Gly Cys Ala Ala
225 230 235 240

Cys Ala Thr Cys Thr Thr Thr Gly Thr Gly Gly Cys Cys Ala Gly Cys
245 250 255

Cys Thr Cys Thr Cys Thr Gly Thr Gly Gly Cys Ala Gly Ala Cys Ala
260 265 270

Thr Gly Cys Thr Gly Gly Thr Gly Gly Cys Cys Ala Thr Cys Thr Ala
275 280 285

Cys Cys Cys Cys Thr Ala Cys Cys Cys Thr Thr Thr Gly Ala Thr Gly
290 295 300

Cys Thr Gly Thr Ala Thr Gly Cys Cys Ala Thr Gly Thr Cys Ala Gly
305 310 315 320

Thr Thr Gly Gly Gly Gly Gly Cys Thr Gly Gly Gly Ala Thr Cys Thr
325 330 335

Gly Ala Gly Thr Cys Ala Gly Cys Thr Cys Cys Ala Gly Thr Gly Cys
340 345 350

Cys Ala Gly Ala Thr Gly Gly Thr Cys Gly Gly Gly Thr Thr Gly Gly
355 360 365

Thr Cys Ala Cys Ala Gly Gly Ala Cys Thr Gly Ala Gly Cys Gly Thr
370 375 380

Ala Gly Thr Cys Gly Gly Thr Thr Cys Cys Ala Thr Cys Thr Thr Cys
385 390 395 400

Ala Ala Cys Ala Thr Thr Ala Cys Thr Gly Cys Cys Ala Thr Thr Gly
405 410 415

Cys Cys Ala Thr Cys Ala Ala Cys Cys Gly Thr Thr Ala Cys Thr Gly
420 425 430

Cys Thr Ala Cys Ala Thr Cys Thr Gly Cys Cys Ala Cys Ala Gly Cys
435 440 445

Cys Thr Cys Cys Ala Ala Thr Ala Cys Ala Ala Gly Cys Gly Gly Ala
450 455 460

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485 490 495

Gly Thr Cys Gly Thr Thr Ala Cys Cys Thr Gly Gly Gly Thr Cys Ala
500 505 510

Thr Gly Ala Cys Thr Gly Thr Cys Cys Thr Gly Gly Cys Thr Gly Thr
515 520 525

Cys Cys Thr Gly Cys Cys Thr Ala Ala Cys Ala Thr Gly Thr Ala Cys
530 535 540

Ala Thr Thr Gly Gly Cys Ala Cys Cys Ala Thr Thr Gly Ala Gly Thr
545 550 555 560

Ala Thr Gly Ala Cys Cys Cys Thr Cys Gly Cys Ala Cys Cys Thr Ala
565 570 575

Cys Ala Cys Cys Thr Gly Cys Ala Thr Cys Thr Thr Cys Ala Ala Cys
580 585 590

Thr Ala Thr Gly Thr Gly Ala Ala Cys Ala Ala Thr Cys Cys Thr Gly
595 600 605

Cys Cys Thr Thr Thr Ala Cys Cys Gly Thr Gly Ala Cys Cys Ala Thr
610 615 620

Thr Gly Thr Cys Thr Gly Cys Ala Thr Cys Cys Ala Cys Thr Thr Cys
625 630 635 640

Gly Thr Cys Cys Thr Cys Cys Cys Thr Cys Thr Cys Ala Thr Cys Ala
645 650 655

Thr Ala Gly Thr Thr Gly Gly Thr Thr Ala Thr Thr Gly Cys Thr Ala
660 665 670

Cys Ala Cys Gly Ala Ala Ala Ala Thr Cys Thr Gly Gly Ala Thr Cys
675 680 685

Ala Ala Ala Gly Thr Gly Cys Thr Gly Gly Cys Ala Gly Cys Cys Cys
690 695 700

Gly Thr Gly Ala Cys Cys Cys Ala Gly Cys Thr Gly Gly Ala Cys Ala
705 710 715 720

Gly Ala Ala Thr Cys Cys Thr Gly Ala Cys Ala Ala Cys Cys Ala Gly
725 730 735

Thr Thr Thr Gly Cys Thr Gly Ala Gly Gly Thr Thr Cys Gly Ala Ala
740 745 750

Ala Thr Thr Thr Thr Cys Thr Ala Ala Cys Cys Ala Thr Gly Thr Thr
755 760 765

Thr Gly Thr Gly Ala Thr Cys Thr Thr Cys Cys Thr Cys Cys Thr Thr
770 775 780

Thr Thr Thr Gly Cys Ala Gly Thr Thr Gly Cys Thr Gly Gly Thr Gly
785 790 795 800

Cys Cys Cys Thr Gly Thr Cys Ala Ala Thr Gly Thr Gly Cys Thr Cys
805 810 815

Ala Cys Thr Gly Thr Gly Thr Thr Gly Gly Thr Gly Gly Cys Thr Gly
820 825 830

Thr Cys Ala Thr Thr Cys Cys Ala Ala Ala Gly Gly Ala Ala Ala Thr
840 845

Gly Gly Cys Ala Gly Gly Cys Ala Ala Gly Ala Thr Cys Cys Cys Cys
850 855 860

Ala Ala Cys Thr Gly Gly Cys Thr Thr Thr Ala Thr Cys Thr Thr Gly
870 875 880

Cys Ala Gly Cys Cys Thr Ala Cys Thr Gly Cys Ala Thr Ala Gly Cys
885 890 895

Cys Thr Ala Cys Thr Thr Cys Ala Ala Cys Ala Gly Cys Thr Gly Cys
900 905 910

Cys Thr Cys Ala Ala Cys Gly Cys Cys Ala Thr Cys Ala Thr Cys Thr
915 920 925

Ala Cys Gly Gly Thr Ala Thr Cys Cys Thr Cys Ala Ala Thr Gly Ala
930 935 940

Gly Ala Gly Thr Thr Thr Cys Cys Gly Ala Ala Gly Ala Gly Ala Ala
945 950 955 960

Thr Ala Cys Thr Gly Gly Ala Cys Cys Ala Thr Cys Thr Thr Cys Cys
965 970 975

Ala Thr Gly Cys Thr Ala Thr Gly Cys Gly Gly Cys Ala Cys Cys Cys
980 985 990

Thr Ala Thr Cys Cys Thr Gly Thr Thr Cys Ala Thr Cys Thr Cys Thr
995 1000 1005

Cys Ala Cys Cys Thr Cys Ala Thr Cys Ala Gly Thr Gly Ala Thr Ala
1010 1015 1020

Thr Thr Cys Gly Gly Gly Ala Gly Ala Cys Thr Thr Gly Gly Gly Ala
1025 1030 1035 1040

Gly Ala Cys Cys Cys Gly Ala Gly Cys Thr Cys Thr Cys Ala Cys Thr
1045 1050 1055

Cys Gly Thr Gly Cys Cys Cys Gly Thr Gly Thr Cys Cys Gly Thr Gly
1060 1065 1070

Cys Cys Cys Gly Thr Gly Ala Thr Cys Ala Ala Gly Thr Cys Cys Gly
1075 1080 1085

Ala Gly Ala Gly Cys Ala Ala Gly Ala Gly Cys Gly Thr Gly Cys Thr
1090 1095 1100

Cys Gly Thr Gly Cys Cys Thr Gly Thr Gly Thr Cys Gly Cys Thr Gly
1105 1110 1115 1120

Thr Gly Gly Ala Gly Gly Gly Gly Ala Cys Cys Cys Cys Ala Ala Gly
1125 1130 1135

Gly Ala Ala Cys Gly Thr Cys Cys Gly Gly Ala Ala Thr Gly Thr Thr
1140 1145 1150

Cys Thr Ala Cys Thr Gly Cys Cys Thr Gly Gly Thr Gly Ala Thr Gly
1155 1160 1165

Cys Ala Thr Cys Ala Gly Cys Ala Cys Cys Cys Cys Ala Cys Thr Cys
1170 1175 1180

Thr Gly Ala Thr Cys Gly Thr Gly Cys Cys Thr Cys Thr Gly Thr Cys
1185 1190 1195 1200

Cys Gly Thr Cys Cys Cys Ala Ala Gly Cys Cys Cys Cys Ala Ala Ala
1205 1210 1215

Cys Cys Ala Gly Gly Thr Cys Thr Ala Cys Thr Thr Cys Thr Gly Thr
1220 1225 1230

Cys Thr Ala Cys Cys Gly Cys Ala Ala Ala Cys Cys Thr Gly Cys Cys
1235 1240 1245

Thr Cys Thr Ala Thr Cys Cys Ala Cys Cys Ala Cys Ala Ala Gly Thr
1250 1255 1260

Cys Thr Ala Thr Thr Thr Cys Thr Gly Gly Cys Cys Ala Cys Cys Cys
1265 1270 1275 1280

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1285 1290 1295

Thr Ala Cys Cys Cys Thr Ala Ala Gly Cys Cys Ala Gly Cys Cys Thr
1300 1305 1310

Cys Cys Thr Cys Thr Gly Thr Cys Cys Ala Thr Thr Gly Cys Ala Ala
1315 1320 1325

Gly Cys Cys Thr Gly Cys Cys Thr Cys Thr Gly Thr Cys Cys Ala Thr
1330 1335 1340

Thr Thr Cys Ala Ala Ala Cys Cys Cys Gly Cys Cys Thr Cys Thr Gly
1345 1350 1355 1360

Thr Thr Cys Ala Thr Thr Thr Cys Ala Ala Gly Gly Gly Thr Gly Ala
1365 1370 1375

Cys Thr Cys Thr Gly Thr Cys Thr Ala Thr Thr Thr Cys Ala Ala Gly
1380 1385 1390

Gly Gly Ala Gly Ala Cys Ala Cys Thr Gly Thr Cys Cys Ala Thr Thr
1395 1400 1405

Ala Cys Ala Gly Gly Gly Cys Thr Gly Cys Thr Thr Cys Cys Ala Ala
1410 1415 1420

Ala Cys Thr Thr Gly Thr Cys Ala Cys Cys Ala Gly Thr Cys Ala Cys
1425 1430 1435 1440

Cys Gly Thr Ala Thr Cys Thr Cys Thr Gly Cys Thr Gly Gly Cys Cys
1445 1450 1455

Cys Thr Thr Cys Cys Ala Cys Cys Ala Gly Thr Cys Ala Cys Cys Cys
1460 1465 1470

Thr Ala Cys Ala Thr Cys Cys Ala Thr Gly Gly Cys Thr Gly Gly Cys
1475 1480 1485

Thr Ala Cys Ala Thr Thr Ala Ala Ala Thr Cys Thr Gly Gly Thr Ala
1490 1495 1500

Cys Cys Ala Gly Cys Cys Ala Cys Cys Cys Thr Gly Cys Cys Ala Cys
1505 1510 1515 1520

Cys Ala Cys Cys Ala Cys Thr Gly Thr Thr Gly Ala Cys Thr Ala Thr
1525 1530 1535

Cys Thr Cys Gly Ala Ala Cys Cys Thr Gly Cys Cys Ala Cys Cys Ala
1540 1545 1550

4210 - 5
 4211 - 7
 4212 - DNA
 4213 - Rattus sp.

4400 - 1
 ycyccsynad antcyvvtwv mtvdvnygt ydrtytcyny vnnatvtvch vvgycytkwk 60
 nairtagndn avrntmv 77

4210 - 8
 4211 - 57
 4212 - PRT
 4213 - Rattus sp.

4400 - 6
 Thr Ala Cys Thr Gly Cys Thr Ala Cys Ala Thr Cys Thr Gly Cys Cys
 1 5 10 15
 Ala Cys Ala Gly Cys Cys Thr Cys Cys Ala Gly Thr Ala Cys Ala Ala
 20 25 30
 Thr Gly Cys Gly Gly Ala Thr Cys Thr Thr Cys Ala Gly Cys Cys Thr
 35 40 45
 Gly Cys Thr Ala Ala Cys Ala Cys Thr Thr Gly Cys Ala Thr Cys Thr
 50 55 60
 Ala Thr Cys Thr Gly Gly Thr Thr Gly Thr Thr Ala Cys Cys Thr Gly
 65 70 75 80
 Gly Gly Thr Cys Ala Thr Gly Ala Cys Thr Gly Thr Thr Cys Thr Gly
 85 90 95
 Gly Ala Thr Gly Thr Cys Cys Thr Gly Cys Cys Thr Ala Ala Thr Gly
 100 105 110
 Thr Gly Thr Ala Cys Ala Thr Thr Gly Gly Cys Ala Cys Cys Ala Thr
 115 120 125
 Thr Gly Ala Gly Thr Ala Thr Gly Ala Cys Cys Cys Thr Cys Gly Cys
 130 135 140
 Ala Cys Cys Thr Ala Cys Ala Cys Cys Thr Gly Cys Thr Ala Cys Thr
 145 150 155 160
 Thr Cys Ala Ala Cys Thr Ala Thr Gly Thr Gly Ala Ala Cys Ala Ala

165	170	175
Cys Cys Cys Thr Gly Cys Cys Thr Thr Thr Ala Cys Thr Gly Thr Gly		
180	185	190
Ala Cys Cys Ala Thr Thr Gly Thr Cys Thr Gly Cys Ala Thr Cys Cys		
195	200	205
Ala Cys Thr Thr Cys Gly Thr Cys Cys Thr Cys Cys Cys Thr Cys Thr		
210	215	220
Cys Ala Thr Cys Ala Thr Ala Gly Thr Cys Gly Gly Thr Thr Ala Thr		
225	230	235
Thr Gly Cys Thr Ala Cys Ala Cys Ala Ala Ala Ala Ala Thr Cys Thr		
245	250	255
Gly Gly Ala Thr Cys Ala Ala Ala Gly Thr Gly Cys Thr Gly Gly Cys		
260	265	270
Ala Gly Ala Cys Cys Gly Gly Gly Ala Cys Cys Cys Ala Gly Cys Thr		
275	280	285
Gly Gly Ala Cys Ala Gly Ala Ala Thr Cys Cys Thr Gly Ala Cys Ala		
290	295	300
Ala Cys Cys Ala Gly Thr Thr Thr Thr Gly Cys Thr Gly Ala Gly Gly Thr		
305	310	315
Thr Cys Gly Ala Ala Ala Thr Thr Thr Thr Cys Thr Ala Ala Cys Cys		
325	330	335
Ala Thr Gly Thr Thr Thr Gly Thr Gly Ala Thr Cys Thr Thr Cys Cys		
340	345	350
Thr Cys Cys Thr Thr		
355		

(210) 7
 (211) 75'
 (212) LNA
 (213) Homo sapiens

(400) 7
 tgtttgctgt ctggacctgg ctgetgatcc tgagcctgct gggagatcct aacgatcccc 60
 aggagcaaca tggggcccac cctagcgggtt cccacccctt atggctgtat tggctgtaag 120
 ctaccccagc cagaataccc accggctcta atcatcttta tgttctgcgc gatggtttatc 180

accatcgttg tagacctaat cggcaactcc atggtcatit tggctgtgac aaagaacaag 240
 aagctccgga attctgg 257

4211 - ?
 4211 - 1320
 4212 - DNA
 4213 - Homo sapiens

4400 - ?
 ttcaggcaac atcttctgtg tcaagtctctc tgtggccgat atgctgggtg ccattctacc 60
 taaactcttg atgctgcctg ccattgccc tgggggctgg gatctgagcc agttacagtg 120
 caagctgggtc ggggtccatca caggggtgag tgtggctggc tccattctca acatcgttgc 180
 attcctcttc aacctgtact gctacatctg ccacagccctc cagtaaggaa ggatcttcag 240
 tcttggaat acctgcctct acctggctat cacctggatc atgacctcc tggctgtctc 300
 gcccaacatg tacattggca ccattgagta cgtacctcgc acctacacct gcatcttcac 360
 ctatctgaac aacctgtctc tcactgttac cctcgtctgc atccacttcg tctccctct 420
 cctctctgtg ggtctctgct acgtgaggat ctggaccaaa gtgtgggggg ccctgtgacc 480
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 gatctctctc ctcttctgag tgtgtgtgtg cctctctaac ggtctcactg tcttgggtgg 600
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 tgcctctggc caccctaagg cccattccag atctctctct gcttatcgca aatctgctcc 1020
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 ctctctgacc tccaagcctg cctctgttca ccccaagctt gcaactgtct accctaagcc 1140
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 gctctactct gttcatttca agcctgtctc cagcaacccc aagcccatca ctggccaaca 1260
 tgcctctgtc ggcagccact ccaagctctg ctctcagtgt gccaccagcc accctaacc 1320

4213 - ?
 4213 - 166
 4214 - DNA
 4215 - Homo sapiens

4400 - ?
 ctccaagcca gctaccagcc atgctgagcc caccactgtt gactatccca agcctgccc 60
 taccagccac cctaagccca ctgctgtctg caacctgtg ctctctgctt ccatttgc 120
 ctagatccct gcattgccc acctgtgtgc tgaagacagt gaactccctg agtcggcctc 180
 tagcctgccc gctgggccc ccaagcctgc tgcagccag ctggagtctg acaccatgc 240
 tgaacttctt gacctactg tagtcactac cagtaaccaat gattaccatg atgtcgtgtt 300
 tatgatgtt gaagatgac ctgatgaaat ggctgtgtga aaaatgctct cgtagggtgg 360
 cagtcagt 368